



CHALLENGES OF DEVELOPING INDIVIDUAL PRIVATE RESIDENCE – A PROJECT MANAGER'S PERSPECTIVE WITH REFERENCE TO EMERGING INDIAN SCENARIO

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ABSTRACT

Project management practice up till recently was synonymous with large-scale construction projects only but with private residences getting complicated to the tune of a full-scale hotel or a commercial building the need of project management is arising. In recent times owners of high-income segment have warmed up to this concept for construction of their private residence, which falls in luxury home segment. Although the job of executing the project comes into professional project management the challenges get no lesser due to so many practical aspect and real industry situations. The paper undertakes study of one such project to closely document the project life cycle and the challenges overcome, which ranged from design change order to procurement to cost control to deliver the project meeting the highest quality standards.

KEYWORDS: Luxury residence, challenges, time over run, design change.

Background

Since the last decade advancement of technology and availability of mechanical service equipment for a large luxury residence added with the ever rising need of owners to put the best available comfort and luxury provisions in their house and made such development no less challenging than a five star hotel but only on a smaller scale with almost equal complexities.

A private luxury residence development is a meticulous and exhaustive project at all stages. With so many design inputs, deliberation with further details, their refinements and revisions to meet the need and workability aspects. Execution side comes up as further more tremendously mammoth and even more challenging with selection of vendors, suppliers, contractors, installers for various work packages and procurement of material with respect to the specifications mentioned by designer which are very particular to meet the design objectives and taste of owner.

Such projects in Indian scenario take one to a different level of challenging experience altogether due to so many reasons sometimes technical as well. One of the greatest issues even in capital city of New Delhi is that there is a dearth of good reliable contractors and installers in the particular project scale and typology segment where the quality of work remains the utmost concerns in the project.

Similarly there are so many other contributing factor leading to the time and cost over runs in usual cases, which are faced by the project management team during the course of project lifetime.

Case Reference project

The project was of developing a luxury private residence for an art connoisseur, and entrepreneur woman, located in one of the posh localities of south Delhi having the highest land value. Project architects were a highly reputed and renowned firm specializing particularly in the very segment of luxury residences.

The proposed residence having total built-up area of 6,200 SqFt on 440 yards of plot was supposed to have a material play on its façade.

Project Management

Most of the owners, belonging to the elite section of the city, usually don't have prior experience in developing a private luxury residence. Such is the case they are extremely busy people involved in their entrepreneurial pursuits.

Quality of work and performance are critically important to the success of a project since it is the owner who will have to live with the results [4].

These clients need to take on board a Project Management firm. For the case project, Demac was shortlisted and taken on board to provide complete services for project development. The Project Management firm as well was specialized in luxury residential developments for high heeled industrialists of New Delhi. The scope included Procurement, construction management, cost management and design management.

The role of the project manager is sometimes seen to belong exclusively to the client's project manager, responsible at a high level for managing the entire project on behalf of the client. However, others equally perform a project manager's role in relation to the subprojects such as design or construction, or the management of a work package [5].

Project Time line

Due to complexity of projects and uncertainty in estimating activity duration, a higher criticism of project scheduling is resulted. One of the most powerful but frequently overlooked influences of project management concerns the roles played by knowledgeable personnel in using power and political behavior to promote successful project implementation [1].

Development of luxury private residence, as observed in most cases is devoid of a fixed time line or target completion period.

Contrary to which this very particular project was supposed to be completed on a very tight schedule as the owner had sold her older property in order to develop this new one and therefore the family had to live in a leased property till the project is completed and handed over to them. The foremost task undertaken by the Project Management team was that to develop a initial time line. The total time estimation was of 22 months post design developments, which included factoring in possible delays to acceptable level. Project time scheduling was developed based on conventional critical path method with reasonable buffer added to activities.

The base schedule was shared with client and architect with different stages and line allotted to each stage marked clearly. This exercise was done to inform about the defined time limits for providing necessary design information required for construction.

Challenges right from onset of project

Contracts

A proper contract agreement is mostly absent in such projects, which makes the owners position little weak. For many reasons i.e. contractor can't be made legally liable for poor workmanship, time delay etc.

In India laws related to contracts and agreements are not put to full use so as to drive safe guard benefits for the owners and further in such work contracts with contractor or installer laws are little too weak to put any stringent or practical liability on contractor to provide good quality workmanship. This, in a scenario of bad workmanship, puts the owner in a compromising spot to accept the final output or get it redone to suitably acceptable quality standard at his own cost. In another possible option a mid way is to be figured out in which the critical work portions are reworked to acceptable workmanship but this option can be explored to the extent here the contractor's profit doesn't deplete too much.

Therefore formulating a project specific contract document was the second major task undertaken by the project management team. The highlights of the contract were work quality, time adherence, cost escalation and HSE liability of contractor.

Successful project management requires the management of quality, cost and time, underpinned by safety. This often necessitates compromise with priority given to two of the three constraints. However safety cannot be compromised in any circumstances on construction projects [5]

Procurement of contractor

As soon as the sufficient design and structure inputs for stage one that was structural framework was received from the consultants shortlisting a good contractor, installer, vendor or supplier was a very exhaustive exercise with project his-

tory and client reviews were gone through to identify each contractor and installer. For major work packages of structure works, stone fixing, pop false ceiling and wood works last completed projects were reviewed and client feed back was recorded. This exercise was certainly time consuming but was a tile one to ensure the work quality. First grade workmanship remained the primary requirement throughout the project for all the awarded works.

Design change order and implications

Very much certain to happen in projects of this particular segment when owner fancy something new and wants the design team to go back to drawing board then delays are inevitable. Frustratingly slowing down the pace of progress at site and sometimes the involved teams loses motivation. If this design change order comes in initial phase i.e. structure works, of the project it doesn't impact the project to much extent except a time gap in time line of particular activity only as other inter linked work packages have not started yet.

Whereas if the design change order is taken at a stage when MEP and finishing works are in progress then it brings implication quite complex in nature along with sequential delay in progress of various work ends. Safeguarding interest of contractors as well late design changes may bring monetary liability on the owner.

Taking note from the case project first such hiccup came very initially when the foundation was only completed only 40%. The client came up with an idea of adding basement to the building. This mere idea sent both designer and project managers into tizzy. Going onto the architectural and structural reworking might eat up a substantial time and will throw the very first contact time schedule out of track.

The project management team drew a quick time schedule review and figured out an addition of 3 months of time and other contractual implications i.e. idle time payment to contractor, if the client wants to execute the new idea. The implications were too much and after deliberation idea of basement was dropped.

Conflict of Interest

It is basically conflict of perspectives from two different vantage points where the architect's primary and foremost pursuit is to achieve the design objectives and get the concept materialized as a physical entity. As observed as usual practice in Indian scenario design and detail deliberations keep happening till the last moments, sometimes even after the commencement of work at site. In pursuit of design perfection the project time schedules takes a back seat. Sometimes it's a sequence of inter dependent implications i.e. design change of one space has other related change sequence. When these changes happen in one or more MEP service then all the works get slowed and it has spiraling effect.

In such scenarios project manager need to make sure that such later on design changes are minimal by defining different design development stages and elaborating to client about the time and cost implication of the same.

Innovative concepts in design are highly valued not for their own sake but for their contributions to reducing costs and to the improvement of aesthetics, comfort or convenience as embodied in a well-designed facility. However, the constructor as well as the design professionals must have an appreciation and full understanding of the technological complexities often associated with innovative designs in order to provide a safe and sound facility [4].

Time and Cost Over Run

Regarding cost overruns, the primary causes are usually contractor related problems, procurement problems or time over runs beyond estimations.

Similarly time over runs in Indian scenario are caused by financial constraints of owner, contractor's inadequate manpower deployment, design change orders and delay in drawing and information delivery to project management team.

As noted in the case project the primary reason for cost and time over run was design change order, insufficient detail information, and delay of drawing delivery. Manpower shortage also contributed to time over run to some extent but was controlled. At no occasion during the project life cycle the owner has financial constraint, neither any payments were hold up.

Due to the above summed reasons the project got delayed by 5 months.

Life-cycle project management is an approach to the management of projects in which objective functions are employed as criteria for decision-making throughout the project's life. The project management information system provides the appropriate means for capturing the correct information and furnishing it to the teams, as well as a set of tools for real-time communication and integrated evaluation of the status of the project against life-cycle objective function [2]. Moreover, value engineering and design review services are essential for better project cost control [3].

Conclusion

The luxury residence segment is driven by passion of the owner foremost then the architect and project manager therefore patience is the key to get the desired work output.

On the same hand too much time consuming on reviews and deliberations and design change will eventually lead to loss of motivation and with time, quality also takes a hit as the focus of project shifts. At the start objective, which was to get the best quality job done, gets diluted with completing the same quicker with certain compromises.

The minimization of time delays and cost overruns in private residential projects would require the availability of adequate funds, allocation of sufficient time and money at the design phase, and selection of a competent project management consultant team. In addition to this a reliable contractor to carry out the work is very much desired [6].

If the project management team is prompt and stays on the top of project as it is observed during the case project the project remains completely under controlled.

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